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8. (Twice Amended) The tamping machine as claimed in claim 5, wherein the piston guide is produced from plastic in one piece together with at least one dampening bushing.

REMARKS

The Examiner has objected to claims 4 and 8 due to certain informalities. Namely, the Examiner has requested that the phrase "dampening bush" be amended to read "dampening bushing." Applicant has amended the application as suggested by the Examiner and withdrawal of the Examiner's objections to claims 4 and 8 is respectfully requested.

The Examiner has rejected claims 1-2 and 5-6 under 35 USC § 103(a) as being unpatentable over Linz, U.S. Patent No. 3,756,375 in view of Darda, U.S. Patent No. 3,957,309. In addition, the Examiner has rejected claims 3-4 and 7-8 under 35 USC § 103(a) as being unpatentable over the Linz '735 patent in view of the Darda '309 patent and further in view of Pauliukonis, U.S. Patent No. 3,703,125. Applicant respectfully disagrees with the Examiner's rejections, and as such, reconsideration is requested in view of the following comments.

Claim 1 defines a tamping machine for soil compaction. The tamping machine includes a working mass which is driven in a tamping manner and which can be driven literally back and forth, via a crank mechanism in the spring assembly, by a motor belonging to an upper mass. The crank mechanism has at least one structural element which is movable linearly back and forth and which is produced from material, the density of which is lower than that of steel. The structural element is movable linearly back and forth and is a structural element from the group comprising a connecting rod, a piston pin, a guide piston, and a piston guide.

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The Linz '735 patent discloses a tamping machine in which the compressing toe is driven by a motor through a crank drive. A plunge disc is guided by guide rods and springs are located between the plunger disc and a compressing tool. The Examiner suggests that the Linz '735 patent discloses each and every element of the invention of claims 1-2 and 5-6 except the making the "at least one structural element ... from a material, the density of which is lower than that of steel." The Examiner characterizes this as "no more than a negative recitation against the use of steel for "at least one structural element."

To address this deficiency in Linz, the Examiner cites Darda's teachings of a similar earth-working tool, allegedly having similar reciprocating structural elements performing the primary function of the tool. The Examiner then states that Darda teaches that at least one structural element (18) may be made of aluminum, which is material less dense than steel.

In view of the foregoing, the Examiner concludes that it would have been obvious to use a lighter material in the claimed invention to address the problem of inherent deadweight of the machine in order to reduce the deadweight of the machine. The Examiner further argues that it would have been obvious to make certain working parts of the machine from lighter weight materials than steel, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

It is well established that an Examiner cannot simply cite different features of the claimed invention from different prior art sources without explaining the motivation to combine or modify the prior art references. There must be actual evidence of a suggestion or motivation, and the showing must be clear and particular. Broad conclusory statements regarding the teaching of multiple references, standing alone are not "evidence."

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Furthermore, it is improper to combine references where the references teach away from their combination. A prior art reference teaches away from the proposed combination of references if it leaves the impression that the product would not have the property sought by the applicant. Darda was clearly of the opinion that aluminum was *unstable* and that Darda's aluminum tubular element must be reinforced with a protective *steel* ring to improve the mechanical stability of the lower end of tubular element 18 (col. 4, lines 27-30). However, protective steel rings could not be mounted on moving components of Linz's tamping machine. Therefore, Darda teaches directly "away" from the invention by indicating that aluminum is less stable than steel and must be reinforced in a manner that is impossible in the claimed invention

Further, the case law is clear that the Examiner "cannot use hindsight reconstruction to pick and chose among isolated disclosures in the prior art to deprecate the claimed invention." Case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for showing of the teaching or motivation to combine the prior art references. As noted above, an Examiner's rejection that depends upon a combination of the references must be based on some teaching, suggestion, or motivation to combine the references. Although the suggestion to combine references may flow from the nature of the problem, the case law states that "[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness." Here, the Examiner has concluded that it would have been obvious to use a material lighter than steel in order to reduce the dead weight of the tamping machine. Therefore, the Examiner is merely defining the problem (the inherent deadweight of the machine) in terms of its solution (using a lighter weight material). Thus, it is only through improper hindsight reconstruction, that the invention would have been produced.

Still further, even if the references were combined as prepared by the Examiner, the invention would not result. Specifically, claim 1 does not require *any* structural element to be made from a material lighter than steel, it requires a structural element that

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is "moveable linearly back and forth" to be made from such a material. In Darda, the structural element that is made from aluminum is a *stationary* tubular element 18 having an inner bore 19 that guides the guide element 9 at the lower end of the piston rod 3. Thus, it is not the tubular element 18 that is moveable linearly back and forth. Instead, guide element 9 at the lower end of the piston rod 3 is moveable linearly back and forth. However, guide element 9 is not made from aluminum. Therefore, if the references were combined, this would produce a tamping machine with a *stationary* structural element, possibly sleeve 67 of the housing 63 of Linz, made from aluminum. It would not, however, produce the invention of claim 1.

In view of the foregoing, applicant believes that independent claim 1 defines over the cited references, and passage to allowance is respectfully requested.

Claims 2-4 depend either directly or indirectly from independent claim 1 and further define a tamping machine not shown or suggested in the prior art. It is believed that dependent claims 2-4 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Claim 5 also defines a tamping machine for soil compaction. The tamping machine includes a working mass which is linearly receptive in a tamping direction to tamp soil. A crank mechanism of the spring assembly drive of the working mass to linearly reciprocate in the tamping direction. The upper mass includes a motor operatively connected to the crank mechanism. The crank mechanism has at least one structural element which is linearly reciprocal and which is produced from material having a density lower than that of steel. The structural element comprises at least one of a connecting rod, a piston pin, a guide pin and a piston guide.

As heretofore described with respect to independent claim 1, neither of the cited references show or suggest a tamping machine that incorporates a structural element that is linearly reciprocal and that is produced from material having a density lower than that

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of steel. In fact, a combination of references suggested by the Examiner teaches away from the tamping machine defined in independent claim 5. As a result, applicant believes that independent claim 5 is in proper form for allowance and such action is earnestly solicited. Claims 6-8 depend either directly or indirectly from independent claim 5 and further define a tamping machine not shown or suggested in the prior art. It is believed that independent claim 5 is allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Applicant believes that the present application with claims 1-8 is in proper form for allowance and such action is earnestly solicited.

Respectfully submitted,

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MARKED-UP VERSION SHOWING CHANGES MADE TO S.N. 09/508,356

Please amend claims 4 and 8 as follows:

4. (Fourth Amended) The tamping machine as claimed in claim 1, wherein the piston guide is produced from plastic in one piece together with at least one dampening bushing.

8. (Twice Amended) The tamping machine as claimed in claim 5, wherein the piston guide is produced from plastic in one piece together with at least one dampening bushing.